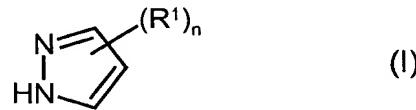


WHAT IS CLAIMED IS:

1. A waterborne coating composition comprising a physical mixture present in the form of a dispersion in water and optionally organic solvents and comprising

- 5 A at least one polyol having urethane groups and chemically bound hydrophilic groups, and
- B at least one polyisocyanate having no chemically bound hydrophilic groups and which is blocked with pyrazole derivatives corresponding to formula (I)

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wherein R¹ represents a (cyclo)aliphatic hydrocarbon radical having 1 to 12, carbon atoms and wherein n is an integer from 0 to 3,

wherein the molar ratio of blocked NCO groups of crosslinking agent B to NCO-reactive groups of polyol A or binder mixtures containing polyol A is 0.2 : 1 to 5 : 1.

- 20 2. The waterborne coating composition of Claim 1 wherein the hydrocarbon radical has 1 to 4 carbon atoms.

3 3. The waterborne coating composition of Claim 1 wherein the polyol A has an average molecular weight M_n (calculated from the stoichiometry of the starting material) from 1,600 to 50,000, an acid value from 10 to 80 and a hydroxyl value from 16.5 to 200.

- 25 4. The waterborne coating composition of Claim 1 wherein the polyol A has a number-average molecular weight M_n (calculated from the stoichiometry of the starting material) from 1,600 to 10,000, an acid value from 15 to 40 and a hydroxyl value from 30 to 130.

5. The waterborne coating composition of Claim 1 wherein the polyol A is prepared from

- A1 5% – 80 % of at least one organic polyisocyanate
- A2 10%-80% of of at least one polyol and/or polyamine with an average molecular weight Mn of at least 400,
- A3 2%-15% of at least one compound containing at least two groups which are reactive towards isocyanate groups and at least one group capable of anion formation,
- A4 0%-20% of at least one polyol with a molecular weight Mn from 62 to 400,
- A5 0%-20% of at least one compound which is monofunctional or contains active hydrogen of varying reactivity, these components being situated in each case at the chain end of the polymer containing urethane groups, and/or
- A6 0%-20% of at least one compound which is different from A2, A3, A4 and A5 and contains at least two groups which are reactive towards NCO groups.

6. The waterborne coating composition of Claim 5 wherein the amount of

- A1 is 10%-60%,
- A2 is 36%-70%,
- A3 is 3%-10%,
- A4 is 1%-10% ,
- A5 is 0%-20%, and
- A6 is 0%-20%.

7. The waterborne coating composition of Claim 1 wherein the blocking agent is 3,5-dimethylpyrazole or 3-methylpyrazole.

8. A process for the preparation of the waterborne coating composition of Claim 1 wherein the polyisocyanate B is added to the polyol A before or during the conversion thereof to the aqueous phase.

9. A process for the preparation of waterborne coating compositions of Claim 1 wherein the crosslinking agent component B is added to the polyol resin A containing urethane and hydroxyl groups before conversion to the aqueous phase and the mixture thus obtained is
5 then dispersed in water.

10. A substrate coated with the waterborne coating composition of Claim 1.

11. The substrate of Claim 10 wherein the substrate is an automotive substrate.